



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,250	05/03/2002	Mario Molinari	P/61813-PCT	8575
156	7590	07/27/2006	EXAMINER	
KIRSCHSTEIN, OTTINGER, ISRAEL & SCHIFFMILLER, P.C. 489 FIFTH AVENUE NEW YORK, NY 10017			HOANG, THAI D	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,250

Applicant(s)

MOLINARI, MARIO

Examiner

Thai D. Hoang

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The headings were missing in the specification such as the background or related art of the invention, summary of the invention, and brief description of the drawings, etc...

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR

1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Information Disclosure Statement

The information disclosure statement filed 12/05/2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Foreign Patent Document EP 0895380 A2 is not provided by applicant; therefore.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2616

Claims 29-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29, line 2, the statement "in which the or each gateway network element" is unclear. It is confusing what is meant by "in which the or each gateway network element".

Claims 30-39 are rejected because they depend on rejected claim 29.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Ambrosoli et al. (Telecommunication Management Network (TMN) architecture for SDH networks using IS-IS routing protocol design and Performances), hereafter referred to as Ambrosoli.

Regarding claim 28, Ambrosoli teaches a communications arrangement (See Fig. 2) comprising:

One or more Local Area Network (Fig. 2 shows area A, B, and C. Each of areas could be interpreted as LAN system); one or more gateway network elements connected to each LAN (L2 is a gateway and connected to each LAN. See Fig. 2 and page 225), and one or more further network elements which, together with the one or more gateway

Art Unit: 2616

network elements, form at least a part of a routing area (See Fig. 1, L1s are other network elements), the one or more gateway network elements providing access to its respective LAN and acting as an interface between the one or more further elements and the one or more LANS (See Fig. 1, L2 is connected L1 and other LANs), wherein the one or more further elements are intermediate systems (L1 and L1 forms as IS-IS system. See Fig. 2), but the one or more gateway elements and the one or more further elements are configured such as to make the one or more further elements appears as end systems as far as the rest of the communications system is concerned (See Fig. 2 and pages 224 and 226. The system could act as ES-IS, which L1 becomes as end system). Each further network element appearing to each other further network element as an IS within the routing area (L1 and L1 forms as IS-IS system. See Fig. 2). The end systems being made known to the rest of the communications arrangement by link state protocol packet generated by one or more gateway network elements (Link state messages are exchanged among ISs, Level 1 and Level 2, to communicate the current reachability of their neighbors. Introduction).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ambrosoli as shown above.

Regarding claims 29-30, Ambrosoli teaches each gateway network element has one or more digital communication channels connected to other elements (See Fig. 2), each of the one or more DCCS being provided with manual end-system adjacencies for at least some of the further elements (page 226, sec 3.2) and gateway network are configured as a Level 2 intermediate system to send the signal or packet to other domains (see Fig. 2) Ambrosoli does not specifically teach each of the one or more DCCS has its "external domain" attribute flag set True and DCC is supplied with a length-zero reachable address prefix. However, Ambrosoli teaches creating entire routing sub-domains containing only static routers and to interconnect these sub-domains to the IS-IS network via reachable address prefixes (sec 3.2, page 226) in order for two domains to connected the signaling of DCC has to be on enable mode, which is true flag as claimed. Reachable address prefixes provides the guarantees correct interworking within the IS-IS network (See sec 3.2, page 226.) In other words, it would route packet to the destination. Therefore, the reachable address prefixes, taught by Ambrosoli, is the same as the length zero reachable address prefixes. Therefore, it would have been obvious to one who have ordinary skill in the art at the time the invention was made for DCC have attribute flag set True for the external domain and supply with a length-zero reachable address prefix because it would need to signal each domains for communication via a reachable address prefix.

Regarding claims 31-32, Ambrosoli teaches the gateway network element has two DCCs each of which gives access to one of the further elements on a corresponding

DCC, the further elements being connected in a chain configuration so as to form a ring with the gateway network element (L2 is connected to L1 and further connected to other L2 to form a ring network configuration. See Fig. 2.)

Regarding claim 33, Ambrosoli teaches terminating further element being configured as a Level 2 intermediate system (page 225-226). The same basis and rationale as applied to claims 29-30 are applied to the remainder of the claim 33.

Regarding claims 34 and 38, Ambrosoli teaches gateway element having one or two channels provided with manual end-system adjacencies for all of the further elements (See Fig. 4), and a static route record in which has been manually entered one or more ranges of consecutive system identifiers corresponding to the manual end-system adjacencies (Ambrosoli teaches using IS-IS protocol to detect the next network element and failure problem on manual and static routing. See page 226.)

Regarding claims 35-37, Ambrosoli teaches there are two of the gateway elements connected to respective ones of one or more LANS, and in which a plurality of the one or more further elements is connected between the two gateway elements (There are at least two 1-2 connected to the LAN, and plurality of LIs connects to L2. See Fig. 2) the gateway network elements and the further elements has two DCCs, a first DCC of one gateway network element being connected to a DCC of a first one of the further elements, a second DCC of the same gateway network element being connected to a DCC of a second one of the further elements, a first DCC of the other gateway network element being connected to a DCC of a third one of the further elements, and a second DCC of the other gateway network element being connected to

Art Unit: 2616

a DCC of a fourth one of the further element (See Fig. 2, L2 are connected two LIs for each area and L2 and L2 are connected to each other.) Ambrosoli teaches the system is manually routing (See page 226). The same basis and rationale as applied to claims 29-30 are applied to the remainder.

Regarding claim 39, Ambrosoli teaches if there are two, equal cost manual adjacencies matching a destination address of a given packet and one of these is associated with a circuit on which the packet was received, then the packet is forward onto another circuit (when L2 receives the packet from Level 1, which all having equal cost matching a destination to OS, the packet is forward by L2 onto another circuit area. See Fig. 2)

Regarding claims 40-41, Ambrosoli shows one network element could forward the message through the routing area to other further element, which is outside of part of the routing area but in the same areas as the further elements (NE 1 is routing to NE5, which is outside of routing domains but still in the same area of further elements), which would be still in the Level 1 and having access to level 2 (See Fig. 4 and page 226.)

Regarding claim 42, Ambrosoli shows the network elements configured as peripheral domain (See Fig. 2.)

Regarding claim 43, Ambrosoli teaches a plurality of nodes including a first set consisting of the further elements (L1 nodes in Level 1 is considered as first set, fig. 2), and second set excluding the further elements, in which the second set comprises intermediate systems, in which each node in the second set has a connection to every

Art Unit: 2616

other node in the second set, and in which the connections only pass through nodes of the second set (Level 2 is considered as second set. L2 nodes are intermediate systems and connected with other L2 nodes. See Fig. 2)

Regarding claims 44-45, further elements lie in a single IS-IS area and nodes of the second set which are directly connected to other further elements (See Fig. 2) In addition, the routing path is considered as the circuit.

Regarding claim 46, Ambrosoli teaches Hello protocol and sequence number protocol data is received from a node of the second set (See page 227). Ambrosoli does not specifically teach discarding hello message for the node directly connected to node on the second set. However, Hello message is well known to use for communicating with neighboring node in the same area or domain (e.g. End system could send Hello message to his neighbor in the same area or domain, not through outside network area nodes.) Since, L2 nodes acts as gateway through different domains, it would have been obvious to one who have ordinary skill in the art at the time the invention was made to discard the Hello message because this would avoid to send the Hello message to outside of the network domain.

Claims 47-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ambrosoli as shown above in view of Zadikian et al. (US Pat No. 6,724,757.), hereafter referred to as Ambrosoli and Zadikian respectively.

Regarding claim 47, Ambrosoli teaches IS hello message and for maintaining a reachable address prefix of the second set while the path or routing is not failure

Art Unit: 2616

(page 226-227.) Ambrosoli does not specifically teach monitoring the hello packets and the system. However, Zadikian teaches monitoring level 1 and 2 routing operation and keep-alive message, which would be not discarded hello message (See col. 20-21, lines 31-26, Zadikian). Therefore, it would have been obvious to one who has ordinary skill in the art at the time the invention was made to have monitoring function because it would help the system stabilized and easier to detect the failure. Moreover, Ambrosoli teaches detect the failure (See page 226), and Zadikian teaches the system is related to SDH routing with DCCS (See col. 21, lines 11-16, Zadikian et al.)

Regarding claim 48, Ambrosoli teaches the parameter could include the address information (See page 224) and Ambrosoli further teaches Setting IS-IS parameter on L1 or L2 for routing to ES (See page 227 and fig. 5.)

Regarding claim 49, Ambrosoli teaches L1s connected to L2s, which on the second set (See Fig. 2), and also teach detecting the failure (See page 226.)

Regarding claim 50, Ambrosoli teaches when network topology change or change in the network configuration parameters occurs, LSP messages are generated and sends to IS nodes (See page 227.)

Regarding claims 51 and 53, Ambrosoli teaches SDH transmission system (Fig. 5). Since Q-interface is used for SONET/SDH systems defined in most ITU-T specifications; therefore, it would inherently use Q-interface because Ambrosoli teaches SDH system.

Regarding claim 52, the same basis and rational as applied to claim 41 are applied.

Response to Arguments

Applicant's arguments filed 05/08/2006 have been fully considered but they are not persuasive.

Regarding claim 28, page 10 of the remarks, Applicants argue the reference is not disclosure or suggestion of any reconfiguration of the gateway and further network elements to appear as end systems as required by amended claim 28. Examiner respectfully disagrees. On pages 224 and 226, Ambrosoli teaches the system could act as ES-IS, which L1 becomes as end system. Also, Applicants argue that each further network element of the reference "does not appear to each other further network element as an Intermediate System within the routing area. Nor are the end systems made known to the rest of the communications system by Link State Protocol packets generated by the one or more gateway network elements." Examiner respectfully disagrees. Fig. 2, section 3.1, Ambrosoli teaches L1s in a sub-domain area routing in IS-IS protocol. Furthermore, in the introduction, Ambrosoli teaches that link state messages (link state protocol) are exchanged among ISs, Level 1 and Level 2, to communicate the current reachability of their neighbors.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 2616

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

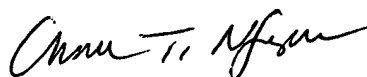
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D. Hoang whose telephone number is (571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TH

Thai Hoang



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600